Down Syndrome Ireland

Supporting students

with Down syndrome in Post Primary School

INTRODUCTION

Increasing numbers of students with Down syndrome are opting to attend a mainstream Post-Primary school. Some are fully included, while others spend some or all of their time in a special class. Inclusive education of teenagers with Down syndrome at mainstream post-primary schools in Ireland is a relatively recent development which needs to be promoted and nurtured.
The majority of students with Down syndrome now successfully attend mainstream primary school, demonstrating that inclusive education is not just possible, but beneficial.
This needs to be continued into the post-primary setting. Research indicates that inclusive mainstream placements lead to the best outcomes for students with Down syndrome, so it is important that all schools create a positive learning environment to support students to succeed.

While it may seem to be a daunting prospect, teachers are already armed with the skills necessary to teach all children, regardless of their needs. This booklet has been developed as an introductory guide to learning how you can meet the needs of teenagers with Down syndrome at mainstream post-primary schools.

CHAPTERS

Down Syndrome Ireland

Chapter 1

An overview: What you need to know

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Background

Down syndrome is the most common identified cause of a learning disability. A genetic condition, Down syndrome is a chromosomal disorder affecting one in every 444 births in Ireland. People with Down syndrome have an additional number 21 chromosome, so their chromosomal count amounts to 47 instead of the usual 46. There is considerable individual variation in people who have Down syndrome; however there are also a number of common features. These include:

- intellectual disability
- developmental speech and language disorder
- low muscle tone
- increased incidence of various medical and sensory issues, including hearing, vision, heart and thyroid disorders.

While children with Down syndrome will share certain physical traits, each child is an individual, defined by his/her particular family heritage and characteristics. Down syndrome is not a disease and it cannot be cured. It is nobody's fault. Having feelings of apprehension about the arrival of a student with Down syndrome in your classroom is normal. Even the parents of a child with Down syndrome may feel this way before getting to know their child. Down syndrome does not define the child. Teenagers with Down syndrome vary in their learning and physical abilities as much as typically developing teens do. These students do have learning strengths you will want to capitalise on during lessons.

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Teenagers with Down syndrome generally develop slower than their peers and they may stay at each developmental stage longer. Limited verbal short-term memory affects the student's ability to process, understand and assimilate spoken language long enough to respond to it. Generally speaking, people with Down syndrome will be better able to understand language than communicate it themselves. Consequently, their cognitive skills are often underestimated. Be sure to take time to listen to your student and be patient when waiting for a response. Your student will also be more susceptible to certain medical conditions, which may affect sleep, thyroid function, heart, sight, hearing and overall health. Some of these conditions make the student tired, and may impact on concentration and attention.

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Vision

Visual impairments may make it difficult for children with Down syndrome to focus on written work. It can be difficult to focus accurately at close range. This is often not fully corrected by wearing glasses.

One of the leading researchers on vision in Down syndrome is Margaret Woodhouse, based in Cardiff University. She says: "It is important for teachers to acknowledge that, even if children wear glasses successfully, or if they focus without glasses, their visual acuity will still be below normal. Thus reading materials, for example, do not look the same to a child with Down syndrome as they do to his/her classroom peers. The material does not appear to have the same level of detail. Enlarging the print may help the child to access print more easily, but does not restore a 'normal' appearance to the material."

What can you do?

- Use large print with good contrast (18-20pt font size, black on white)
- Use good, clear, colourful illustrations. Bold, saturated colours are better than pastels.
- Look critically at textbooks. Coloured print used for headings may not be easily seen. Key information presented in boxes may be difficult, as contrast is reduced by coloured backgrounds. Complex books often have fairly small print. (It's easy to think the student doesn't have the capacity to read and understand material, when actually they are struggling to see the words.)
- Remember this applies when the student is writing, as well as reading. They need to be writing on bold lines in marker pen. (The pale blue lines in copy books may not be visible to the student.)
- Consult a teacher for the visually impaired for advice.

Hearing

Over 80% of children with Down syndrome have some form of hearing impairment. Even a mild hearing impairment can mean that around one third of speech sounds are sub-audible. This could rise to half or two thirds of speech sounds in a noisy classroom environment. Between 50% and 70% of children with Down syndrome suffer from fluctuating hearing loss caused by middle ear fluid. This means that hearing can be adequate one week, inadequate the next. Long intervals between hearing tests mean that these fluctuating problems are often overlooked, although they can have a significant impact on a student's ability to access the curriculum.

What can you do?

- Make sure that the student is sitting near the front of the classroom.
- Encourage the student to wear their hearing aids if needed.
- Give the student the benefit of the doubt if they appear not to be listening.
- Cue the student by name when giving an instruction or asking a question.
- Provide visual materials to support the spoken word, including visual timetables and pictures of the topic at hand.
- Use a buddy system, so that the student with Down syndrome is not left behind just because they missed an instruction.
- Pre-teach new material in a quiet setting, such as individual resource time.
- Alert the parent if there seems to be a change. Reduced hearing is often more evident in a noisy classroom than at home.
- Take advice from visiting teachers for the hearing impaired, and use a radio aid or sound-field system if recommended.

Medical

Down syndrome affects multiple organ systems, leading to increased incidence of many medical conditions. Some of the major conditions are outlined below.

- Sleep apnoea affects 30-60% of children with Down syndrome. This can cause poor growth, further delayed development, as well as concentration and attention problems. (It's difficult to focus when you are exhausted.)
- Cardiac issues occur in 40-60% of children with Down syndrome. These can also affect growth, development, and concentration. (Exhaustion can arise from poor cardiac function, as well as poor sleep.)
- Hypothyroidism occurs in between 4% and 16% of children with Down syndrome (rising in adolescence), leading to symptoms such as tiredness, mood disorders and weight gain.
- Auto immune diseases like coeliac disease and inflammatory arthropathy are all considerably more common than in the general population.
- Medical issues may not seem directly related to learning, but they are likely to lead to exhaustion and increased vulnerability to minor infections which are common in

school settings. Absences due to minor infections and general exhaustion, along with frequent medical appointments (to monitor various conditions) lead to poorer school attendance than their peers, and hence fewer opportunities to learn, so it's important to make the most of the times when the student is well.

What can you do?

- Be aware of possible exhaustion. Concentration will be poorer at the end of the school day.
- Give well targeted, differentiated homework. Look in the student journal so that you are aware of the total volume of homework across subjects.
- Be aware that if a child has a cold, hearing is likely to be impacted.
- Be observant, and communicate any concerns promptly. Sometimes changes in energy, vision or hearing can be more evident in the classroom.

Regardless of differences in the learning profiles of students with Down syndrome, participation in mainstream education is a major stepping stone for the successful transition of all youths into adulthood. As adults, many people with Down syndrome lead fulfilling and fairly independent lives with a minimal level of support.

The learning profile of a teenager with Down syndrome

Calling students with Down syndrome developmentally delayed is misleading - they simply have a different learning style. Awareness of the characteristic strengths and weaknesses of this learning profile will encourage progress and help their teachers devise appropriate, meaningful and relevant activities for the student/s. While teenagers with Down syndrome do have a particular learning profile, their social and emotional needs are the same as those of their peers. Where possible, it is best to address these needs in a manner appropriate to the teenager's age. They should be expected to act in an age-appropriate and socially acceptable way. However, some teenagers with Down syndrome may need support to do so.

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As people with Down syndrome approach their teenage years, an emerging awareness of their inabilities may lead to low self-esteem and active avoidance of failure. To counteract this, teachers should use strategies like errorless learning in the classroom. Encouraging success is the best motivator for the student's learning. The more the errorless method is used, the likelihood of the teenager enjoying the school experience and reaching his/her potential increases. Keeping in mind that all students are unique in their own way, this learning profile is intended as a general guideline. Students with Down syndrome vary widely in development, personality and behaviour and as such, they should have access to a varied curriculum suited to their learning/social needs.

Characteristics of a typical learning profile

- Overall, exceptional visual learners
- Intellectual Disability varies from mild, moderate to severe
- Strong ability in visual processing and visual memory
- Strong use of gesture and motor responses
- Sensitive to failure and emotional cues
- Speech and language delayed relative to nonverbal mental abilities
- Difficulties with verbal short-term memory, i.e., recalling facts and remembering verbal information and instruments
- Developmental delay in working memory
- Possible display of a 'learned helplessness' when students are too used to being over-supported
- Most students will welcome the opportunity to work independently and in cooperation with their peers

Developing speech, language, communication & memory

As Down syndrome selectively impairs speech and language, all students with Down syndrome will have speech and language disorders over and above what would be expected for their intellectual ability. Read that sentence again, and try to imagine how frustrating it must be to be continually underestimated because of poor speech and language. Speech and language and communication need to be considered separately. The easiest way to think of them is in terms of form, content and function. Or alternatively: how you convey your message, the content of the message, and whether the essentials are understood by the listener.

Language is the content: receptive language is what the student understands, expressive language is the message the student is trying to convey. It can be difficult for a student with Down syndrome to process language, to understand the message. It can be difficult to think of words, and then organise them into a phrase or sentence in order to respond. It can be difficult to learn new vocabulary just by exposure.

Speech is the usual form: It's how the student is trying to get the message across. Speech is often unclear, because of difficulties in remembering the order of sounds and syllables in a word, of coordinating muscles to make those sounds, and to make them in the right order consistently so that someone can understand. For most teenagers who have Down syndrome, speech is clearer when reading, so for oral language tasks, preparation time and support to write down answers will increase their ability to participate. It is important to keep encouraging speech, as speech clarity can improve with practice.

Communication is all about getting your point across. That can be frustrating if you can't speak very clearly, and can't find the right words. If you're not easily understood, people often don't wait. They might think they know what you want to say and speak for you. It can be disheartening and frustrating.

Speech and Language impairments affect access to all areas of the curriculum. Language impairment is probably the most significant disability for the majority of students with Down syndrome.

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What can you do?

- Accept that language is a significant difficulty, and adjust your own language to compensate.
- Use short, straightforward sentences.
- Allow processing time: count to 10 before you say anything else!
- Use positive sentences. It's much easier to understand "we walk in the corridor" than "don't run in the corridor". In the first sentence, the key word is WALK. In the second, the key word may be RUN. There is often a 'hidden curriculum' of unspoken rules within schools. The student with Down syndrome may need to be explicitly taught these.
- Think about word order. "We'll watch the video after you've finished your written work" will probably be understood as "video, then written work" by a student who has difficulty processing language, leading to confusion.
- Teach about how grammar impacts word meanings. Unless explicitly taught, the student with Down syndrome may not realise that tidy and untidy have different meanings, as they may just focus on the core part of the word. It might be difficult for the student to pick up a brief sound at the beginning or end of a word such as 'un' or 'dis' or 'ed'. Seeing the words written down may help.

- Don't give multiple instructions in one sentence. The student with Down syndrome is likely to pick up on either the first or the last, and be oblivious to the others.
- Help the student to develop their own visual supports; visual timetables, lists, photos, pictures, etc. to support understanding.
- Identify key vocabulary and arrange for pre-teaching, ideally in resource time, ahead of classroom topics. Using resource time for preparation, rather than catch-up, is one of the most important ways of supporting a student with Down syndrome to succeed.
- Be aware that if a student who has Down syndrome is unable to answer questions about material they have learned, it may be that they have failed to understand the question rather than the material.
- If the class is doing oral language work, give the student a written question and some thinking time to facilitate participation orally.
- Allow alternative methods of demonstrating learning, such as project portfolios, short PowerPoints, photographs of sequences with brief text (particularly in practical subjects), videos, etc.
- Continuing development of good literacy skills is essential. Language and literacy tend to develop in tandem. Having things written down means you can process language at your own pace, and written language provides visual support for learning and recall.
- For students with Down syndrome who still have poor speech clarity, continuing high standard literacy instruction is essential.

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This is for two reasons. The first is that the majority of students with Down syndrome have clearer speech when reading, and the second is that written language is a rich, flexible way of communicating. It requires minimum equipment and it is widely understood. Literacy skills were almost unheard of in people with Down syndrome 40 years ago, whereas now the vast majority acquire at least functional literacy, probably due to higher expectations and better teaching.

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Working memory

Working memory is a temporary storage system that underpins our capacity for complex thought. We need to be able to hold information in working memory in order to manipulate the information in any way.

If you've ever worked with a student who listens to an instruction, walks to the appropriate part of the classroom, then looks blankly at you (or the cupboard) when they get there, you will understand the importance of working memory!

Processing and storing verbal information and learning from listening is especially difficult for students with Down syndrome.

Impairment in working memory means that students with Down syndrome learn and remember skills and information in a different way, and this needs to be taken into account. Visual and Spatial working memory is usually relatively good, and so visuo-spatial information is likely to be conceptually easier. Once they learn their way around the school, the student with Down syndrome is unlikely to forget.

What can you do?

- Present materials visually.
- If the class is doing oral language work, give the student a written question and some thinking time, to facilitate participation orally.
- Use lists.
- Help students to develop their own strategies. This is likely to be a long term problem, so learning to write a reminder or a list, colour coding books for particular days, and writing down homework promptly will be essential.

Inclusion

Promoting whole school Inclusion

Starting out in a new school, the child with Down syndrome needs to feel part of the school, whether in the classroom or not. Backed by a consistent policy on inclusion, the whole school ethos ideally reflects the active inclusion of students with special needs. The entire school - teachers, secretaries and caretakers alike – is responsible for ensuring that the school's inclusion policy is maintained during daily interaction with the student with Down syndrome. The student can become very confused if s/he receives mixed messages about social propriety from one staff member to the next. Young people with Down syndrome are particularly sensitive to the way others behave. Consequently, providing a unified definition of appropriate social boundaries is vital to the teenager's learning and development. At the same time, the student may require a certain degree of flexibility in school, especially regarding overall teaching and time management. Treat the student with Down syndrome as you would any other teenager, but allow more time for daily interactions, such as changing classes.

While the teacher has primary responsibility for the student's well-being, other school staff can be made aware of the student's needs. At the same time, the board of management and principal are responsible for the development, implementation and regular review of the school policy on inclusion.

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Encouraging a positive environment

A positive classroom environment is a great indication of how invaluable the teacher and/or SNA's contribution can be. Teachers need to foster the kind of accepting and helpful atmosphere that allow a student with Down syndrome to prosper. Effectively, having a positive attitude solves problems even before they arise.

Laying the groundwork for including a student with Down syndrome is as important as what happens once the student arrives. Some schools have found it beneficial to talk to the parents of the class, including the parents of the student with Down syndrome, before the school term begins. An open communication network between the parents will, in turn, filter down to the students and the classroom. An informed class will be less likely to make snap judgements about the student with Down syndrome. Having a lesson on disability issues as a way of highlighting the strengths of the new student is another helpful way of preparing for successful inclusion.

Benefits of inclusion

Mainstream schooling is essentially about giving students of all abilities the right to a balanced education, and that means including every student in the community. When a student with Down syndrome starts post primary school from a regular mainstream environment in primary school, the social and learning needs of the student would be best served by enrolment in a regular, mainstream class in the post primary school. The support of a Special Needs Assistant (SNA) is crucial for the success of such a transition.

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The other option, placing the student in a special class structure within the post-primary school, is not, in many cases, in the best interests of the student. Being in a 'special' class can further isolate the student from his/her peers, preventing the formation of meaningful friendships. Special classes are often mixed age, reducing the opportunities for learning with same-age peers. Furthermore, a special class environment can expose students with Down syndrome to inappropriate behaviour, which they might easily imitate from their peers in the special class. Students learn a lot from others during their young, impressionable years; the talents and sensibilities of one student are often an education to another. Feeling part of the group is as important to students with Down syndrome as it is to any other teenager.

On an individual level, inclusion promotes the academic and social wellbeing of the student, whether or not s/he has Down syndrome - or any other learning disability for that matter. So much of a student's learning process takes place outside the classroom and in the company of other students. Daily opportunities to interact with typically developing teenagers – during breaks, lunch time or even class trips – provide the student with Down syndrome with invaluable models for normal and age-appropriate behaviour and language. The other students also benefit from this kind of interaction. Having someone in their class with Down syndrome is seen as an enriching experience, one that will hopefully fuel dinner table conversations at home about tolerance and diversity.

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Why mainstream?

Research has consistently shown that students with Down syndrome gain academic, social and behavioural advantages from being educated with their typically developing peers in mainstream schools. This includes second level schools. There is no research showing any benefit of education in special classes or special schools for children who have Down syndrome. With appropriate support and accommodations, students with Down syndrome can benefit from mainstream schooling, and inclusive education has benefits for all students.

Accessing the curriculum

Differentiation

As students become older, the cognitive gap between teenagers who have Down syndrome and their peers becomes more evident. This is not a reason for favouring segregated education. Society is becoming more inclusive, and supporting students with Down syndrome to succeed in mainstream education is more important than ever. Even with the best differentiation in the world, students with Down syndrome will not be able to learn everything that you are teaching in a lesson. However, every student should be able to learn something from each lesson. It is the responsibility of the teacher to ensure that the material is differentiated so that learning happens.

Put simply, differentiation is the process of reducing the amount of work and reducing the level of work involved for students, as they move through various assessment and examination routes. In practice, it may also mean having several different ways of reinforcing that material.

It is particularly evident in the early years of second level that the lack of differentiated materials is having an adverse effect on the inclusion of children with Down syndrome in mainstream classes. The syllabus for second level subjects, as presented in current text books and materials, is beyond the level of comprehension and reading ability of many students with Down syndrome.

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The best way of ensuring a successful learning environment is through differentiating the curriculum to suit the needs of the student with Down syndrome. The key to effective differentiation is being as flexible as possible and combining the student's individual learning styles, strengths and weaknesses with his/her particular developmental stage. Where possible, allow the student to participate in class lessons. The teacher needs to decide which or how much of the lesson content the student will focus on during follow-up activities. Under the guidance of the teacher, the SNA can possibly supervise modified activities for the student to access the curriculum. The SNA may also be able to simplify question/answer sheets as a follow-up activity to class lessons.

Factors to be considered when planning lessons or differentiating the curriculum for teenagers with Down syndrome

- Age
- Hearing loss
- Language comprehension
- Speech skills
- Phonological awareness
- Reading skills
- Writing skills
- Spelling skills
- Memory skills
- Conversation and communication skills
- Support for learning at home
- Interests, hobbies, extra-curricular activities
- Use of computer
- Use of media
- Social and academic confidence

We have developed a number of sample differentiated materials and they can be accessed on our website www.downsyndrome.ie.

Strategies for differentiating the curriculum

- Determine the main focus, content and vocabulary the student should learn.
- Provide the child with learning support - Class Teacher, Resource Teacher, Special Needs Assistant.
- Choose an appropriate context for learning the chosen material - whole class, group work, working with a partner, etc.
- Use familiar and meaningful material relevant to the student.
- Ensure language and comprehension material is appropriate to the teenager's developmental stage.
- Provide the student with opportunities to work independently once s/he is familiar with the content.
- The teacher and SNA monitor work from a distance.

IEP: Individual Education Plan

Parents often ask - What is an IEP? School staff can sometimes become so familiar with IEP's that they forget to explain that an IEP is simply a plan to help the student and also to help others involved in the student's education. It is a written document prepared for a named student. It specifies the learning goals that are to be achieved by the student over a given period of time. It specifies the teaching strategies, resources and supports necessary to achieve those goals. The IEP documents additional interventions to those differentiated strategies being used in the classroom.

An IEP identifies where the student is, where they are going, how they will get there and how to tell if the journey is successful.

When the Education for Persons with Special Education Needs Act, 2004 (EPSEN) was passed, it set out a framework for the preparation and implementation of IEP's in this country. The timing for this has not yet been agreed. However, though there is no legal requirement to provide an IEP for a student with special education needs, it is still considered best practice to do so. The NCSE (National Council for Special Education) emphasises that an IEP provides evidence of agreed special interventions and records the strategies used to enable the student to progress. An IEP identifies where the student is, where they are going, how they will get there and how to tell if the journey is successful.

It must be a practical working document, noting the main areas of need and how to tackle those needs. It gives teachers and parents an opportunity to share views about the particular need and how to set up strategies best suited to the student. In that way, it has to be individualised. It has to be student centred.

Under Preperation

Information needs to be gathered to provide a comprehensive student profile. It should specifically identify the current strengths and priority learning needs of the pupil. Sources of information will be:

- parents,
- student,
- school,
- other professionals such as:
    - Medical,
    - Speech and Language Therapist,
    - Occupational Therapist,
    - Psychologist,
    - Audiologist,
    - Optician.

The Student Profile should also consider:

- Personal and social skills,
- Cognitive ability,
- Motor skills,
- Language/communication,
- Literacy/numeracy,
- Attitude/motivation,
- Access to the curriculum.

Who does this work?

In some schools there is an IEP Co-ordinator. In others, the class teacher or the resource teacher or the learning support teacher becomes the co-ordinator. Sometimes, small informal meetings take place, leading on to a more formal meeting. It helps if parents are involved at an early stage because then parents have opportunities to share their priorities and concerns in advance of the meeting. Likewise, parents have been on the educational journey with their child for many years, and they know their child best. Parents will commit more freely to the plan having had a real share in its preparation. In all cases the IEP should be agreed and discussed with parents before being finalised.

The plan

The student's current level of performance is noted to help identify priority learning needs and to track progress. Priority learning needs are for those areas where the child is experiencing difficulty. It is important to concentrate on a realistic number of the most serious needs.

Targets

Targets should relate directly to those priority needs. A target should always clearly specify the desired learning outcome. Targets are used where the student needs additional help. Less complex skills come before the more complex ones.

Writing the targets means identifying:

- What the student will do.
- Conditions under which the student will perform the task.
- Materials and supports required.
- Time frame - If a teacher asks: "What do I want this student to be able to do in 1 months' time?" there will be purposeful planning.

Strategies

Targets are about what the student will be able to do. Strategies are about what the adults will do to help the student achieve their targets. Teachers should state the strategies and it should be clear to all involved WHO is responsible for the implementation of the target. Conditions need to be outlined, such as what the environment is? Is it the school yard, resource room or one of the classrooms for example. Criteria need to be set for the student to demonstrate both the level of accuracy and quantity, for example: to read 8 words out of 10.

Targets and supporting strategies may need to be shared with staff, for example; if certain attention seeking behaviours are to be ignored, it will be helpful if all staff are aware and so there is a whole-school approach. Particularly when dealing with behavioural issues, strategies need to be very concrete, for example; Which adults are monitoring the behaviour? What rewards will be given? By whom? Goals should be set high but at an attainable level.

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Review

The Principal or SEN Co-Ordinator should arrange for a review at regular intervals. Parents should be involved in the review. They can input what happens at home and try to build on the work at school.

Questions for the review

- Has the student reached the targets? Then move on to next target.
- Is he/she making progress towards the target?
- If target has not been met - they may request that the Principal arrange for such a review.
- How can we divide it into smaller steps?
- Do teaching strategies need to be altered?

• Does the target need to be changed or set aside for a while?

If parents believe that the goals of the IEP are not being achieved and if a review has not occurred in the previous six months - they may request the Principal to arrange for such a review.

Strategies for learning and teaching

- Identify words and concepts and target these ahead of time where possible.
- Explicit teaching of vocabulary will prepare the student for learning and understanding.
- Teach an understanding of words and concepts through the use of actual objects and progress from the concrete to the abstract.
- Consistently check understanding.
- Seat the student in a position that facilitates the use of prompts, cues or other strategies during learning and teaching.
- Before initiating conversation it is important to ensure that the student's attention has been secured.
- Use a slower speech rate if necessary as this facilitates the processing of information. However, it is important that the speech rate is not so slow as to lose the continuity of the message.
- It may be necessary to exaggerate and use gestures when helping a student with a severe receptive language disorder understand the meaning of a word that symbolises an object or an action. Depending on the age of the student it sometimes helps to involve the students in selecting the strategy that works best for them.
- Use pictures or photographs to reinforce and review the vocabulary that has been taught.
- Use role play as a regular feature of language earning as this helps alternate speaker/ listener roles.
- An understanding of sentences is sometimes difficult for the students and often presents in the classroom with difficulties in following and poor oral comprehension. Give simple directions in sentences to provide students with experiences in understanding sentences (eg: 'Put the book on the table' etc).
- Have students repeat what they have heard to check understanding.
- Activities such as conversations, discussions, radio/television broadcasts, puppetry, telephoning, reporting, interviewing, telling jokes/riddles, book reports and role playing can be used to develop oral language activities.
- Co-operative learning can be used to encourage discussion.
- Have clear rules stipulating that the verbal contributions of all students have equal value.
- Be aware of the role that misunderstanding can have in possible behaviour and/or social problems.
- As some students may have to attend speech and language therapy sessions during school time, try to ensure that students will not always be missing out on the same subject/ activity.

Consolidation of skills

The ability of students with Down syndrome to learn and retain information can vary on a daily basis. Consequently, they can take longer than typically developing peers to learn and consolidate new skills.

Strategies for consolidating new skills

- Provide the student with extra time and opportunities to rehearse a given skill or behaviour several times, which will help him/ her internalise the task.
- Present new skills and concepts in a variety of ways, using concrete, practical and visual materials where possible.
- Teach the child to apply a specific skill to a variety of situations – a skill learned on the yard may not automatically transfer to the classroom.
- Continue to teach new skills, ensuring that previously acquired skills have not been overrun by new input.

Homework

Homework is a significant part of the secondary school curriculum – it supports and reinforces the main content of the lesson. Homework helps all students develop good working habits and attitudes, while encouraging self-discipline and responsibility. Beyond the controlled conditions of the classroom, doing homework provides the student with a chance to apply learned concepts on their own. Students with Down syndrome can benefit from homework activity as much as their peers. At the same time, they will need extra support to complete assigned homework, as possible problems associated with language and working memory can make remembering and understanding homework more difficult for the teenager.

Strategies for assigning homework

- Match the homework to the skills, interests and needs of the student – ensure the tasks are neither too difficult nor too easy.
- Assign an appropriate amount of homework; consider how long it will take the student to complete his/her homework. Further instruction may be needed if s/he cannot complete assigned work successfully.
- Liaise with other teachers to coordinate homework so the student is not inundated with assignments for the same date.
- Make assignments clear and focused. Link in the lesson with short, concise additional explanations.
- Make sure students understand the purpose of the assignment.
- Write homework down in full in a homework journal or book and include a date for completion for all assignments – the SNA can help with this if needed.
- Provide constructive feedback. Consistent and constructive feedback motivates the student to complete assignments and progress in learning.
- Give help as needed. Students who do not understand an assignment need to know that help is available from the teacher or SNA.
- Talk to the parents – they can be an enormous help in supporting the student to successfully complete homework.

Communication with parents / family

Having a student with Down syndrome in the classroom is an experience that can fuel apprehension not just at your end, but with the parents of the student as well. However, engaging in open and honest two-way communication will ease the transition for all during this exciting and challenging time.

Initial meetings with the parents of the student with Down syndrome would ideally take place before the student begins the new school year. Meeting with the parents, you will quickly learn that your new student is an individual who has distinct likes and dislikes, hobbies and interests.

The teacher should decide whether the SNA should be present during the one-to-one meetings with the parents of the child with Down syndrome. These discussions with the parents can potentially provide very helpful information about the student's preferences and family background – all of which can be used in adapting relevant teaching material for the student. The SNA will also find this information helpful for forming and engaging a meaningful working relationship with the student.

During 1st Year, it may not be necessary for the student to participate in all subjects. The specific subject choices will have to be discussed with parents and the student with Down syndrome. Careful selection of subject choices will fuel the student's self-esteem and academic progress.

Talk to the parents about the teenager's background and daily routines. How many brothers and sisters does s/he have? What are their names? What are his/her hobbies, favourite pop stars, football players, etc.?

A productive starting point for any written or language activity in the classroom is the homework journal, a diary of daily events which the parents and teacher can initially work on together to get started.

Spending a good part of the day with the student, the teachers and SNA are in an ideal position to report any changes in the student's behaviour or condition to the parents. Make sure that the parents inform the teacher of any pre-existing medical conditions or symptoms. Being informed of the medical needs particular to the student is an important way of supporting the teenager, the parents – and reinforcing an overall positive inclusion experience.

Resources

Classroom Language Skills for Children with Down Syndrome ~ A Guide for Parents and Teachers

Libby Kumin

ISBN: 978-1-890627-11-9

LANGUAGE DEVELOPMENT – A booklet about language development in the secondary school

Available as a free download from:

www.dsscotland.org.uk

Short-term Auditory Memory – Information Sheet

Available as a free download from:

www.downs-syndrome.org.uk

General resources

Differentiation in action

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www.downsed.org/
www.dsscotland.org.uk
www.ncse.ie
www.sess.ie
www.education.ie
www.ncca.ie

Acknowledgement

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Down Syndrome Ireland

Chapter 2

Literacy: Reading and writing

Literacy: Reading & writing

Teaching reading has proven to be a great way of improving the development of language and working memory skills. Written words are language made visible and tangible.

Students with Down syndrome learn to read in the same way as their peers, but they often take longer to learn and need repetition and reinforcement to maintain and develop their skills. They follow similar patterns to typically developing students in acquiring reading skills, i.e. sight vocabulary is learned first, followed by the use of phonics to spell and decode words.

Students with Down syndrome tend to rely on their sight vocabulary skills longer than their peers. Consequently, they may arrive at Post-Primary school still requiring help with word attack and decoding skills. Any teaching programme used in reading lessons should include both sight vocabulary and phonics/spelling skills, e.g. Phonological Awareness Training (PAT).

Understanding and using grammar is a particular area of weakness for students who have Down syndrome. Teaching reading develops the comprehension of syntactical rules, word morphology, and grammar. Reading aloud supports speech articulation and word production skills. In post-primary school, learning to read or continuing to progress in reading ability profoundly affects the student's self-esteem, independence and quality of life.

The reading ability of students with Down syndrome can vary widely in post-primary school. Some might have a similar decoding ability to their classmates, yet they may be

lagging behind in reading comprehension. Improved comprehension skills are best achieved with specific teaching materials - there are many workbooks and resources written for improving comprehension ability, and resources for students with specific language disorders are often particularly appropriate. Be aware that because of underlying language disorders, if a student is unable to answer questions on a text it may be due to a failure to understand the question rather than the text.

Whenever possible, allow the student to follow and read the class text. Such a basic activity can actually work as a reinforcement of positive self-image. If this is not possible, offer suitable reading material to the student, perhaps based on his or her life experiences and usual daily activities.

Reading material can be developed to link in to other timetabled subjects. For example, taking photos and adding text to describe a process in a home economics class creates a resource that is both reading material and a recipe book.

Whenever possible, allow the student to follow and read the class text. Such a basic activity can actually work as a reinforcement of positive self-image.

Strategies to improve reading and writing

- Teach reading every day.
- Use words and reading material suitable for the student's language comprehension level and interests.
- For new vocabulary – teach the whole word first, then the letter sounds and syllables.
- Teach meaning and vocabulary together.
- Make reading and writing both fun and meaningful, e.g., start a newspaper, magazine or diary project.
- Use a conversation diary to record daily events, both in and out of school.
- For students with delayed speech development, create and use sentences that are useful in everyday conversation.
- Encourage paired reading, group reading, informal reading with peers and discuss text.
- Practice writing activities with reading to encourage comprehension and memory skills.
- Help the teenager to construct sentences using a personal dictionary, word bank, word cards or computer.
- Encourage re-telling of a story or reading material, using visual material, to lead on to a writing synopsis of a story.
- Use a tape recorder to document ideas for a text.
- Rewrite the reading material in simpler text if necessary.
- Provide multiple choice written answers until the student can learn to answer questions without visual cues.
- Teach the student to read the text two or three times to encourage reading comprehension.

Support comprehension

- Utilise visual strengths
  - Use picture cues to visualise words, sentences, short stories.
  - Use picture cues to discuss feelings, make predictions, explain causal events, etc.
  - Write questions and provide answer choices; highlight key words.
- Support vocabulary and grammar
  - Check understanding of difficult/new words and/or contexts, word tenses etc.
  - Directly teach new vocabulary in resource sessions, ideally before the topics are addressed in class.
  - Provide other examples, model and demonstrate, etc.
  - Formulate sentences with flashcards.
  - Use new words in sentences.
  - Link new words to existing vocabulary.
- Narrative skills
  - Sequence pictures from a story: beginning, middle and end.
  - Develop sentences which summarise the pictures and/or match sentences to pictures.

Many students with Down syndrome learn how to spell words purely by relying on their visual memory and sight vocabulary.

- Use sequenced pictures and sentences to retell stories.

- Questioning
  - Question words (who, what, where, when, etc.) may need some direct teaching (can be supported with visuals).
  - Practice answering questions (progress to answering with complete sentences) and formulating questions.
  - Use natural discussion to reinforce.
  - Support spoken language difficulties e.g. give choices, picture selection tasks, written questions, etc.
- Model and scaffold use of strategies
  - Look-back.
  - Using context (including pictures).
  - Link to world knowledge and personal experience.
  - Prediction/inference.

Phonics & spellings

Many students with Down syndrome learn how to spell words purely by relying on their visual memory and sight vocabulary. It is vital that they are taught phonics and spelling with reading in order to encourage word attack skills and the development of an alphabetic strategy for reading. While using an alphabetic strategy encourages faster progress, doing so will require the reader to hear individual sounds in the words as they are spoken (phonological awareness) and an ability to link these sounds to the written word.

An alphabetic reader decodes an unfamiliar word by sounding out the letters and subsequently 'blending' them to guess the word. She or he has to be able to say the word, break it into sounds (segmenting) and then work out the probable letters needed for spelling. Typically, a student will take two years to progress from knowing letter sounds (basic phonics teaching) to being able to use phonics and decode and spell. This process is that bit more difficult for students with Down syndrome, due to problems with auditory processing and working memory.

You can use the same resources for teaching the student with Down syndrome as you do with any other students who might have difficulties learning spelling and phonics. There are many teaching materials which have proven to be extremely effective for improving the phonics and spelling of students with Down syndrome, such as PAT and spelling programmes like Starspell. Most students who have learned phonics skills alongside their reading programme will

eventually be able to draw on their visual and phonological skills to decode new vocabulary, though some students with significant hearing or auditory processing difficulties may continue to rely on visual memory for spelling.

Strategies for teaching phonics

- Follow a phonics programme appropriate to the student's developmental stage.
- Differentiate letter sounds.
- Differentiate beginning and ending of words.
- Fill in missing letters, e.g. cvc words; initial, middle and final consonants.
- Work on blending sounds and letters.
- Sound out words when spelling and reading.
- Make personal phonics notebooks, incorporating word families, word endings, rhyming words, etc.
- Use teaching resources like P.A.T., Starspell, Clicker 4, etc.

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Handwriting

Handwriting is a complex fine motor skill, and like all motor skills takes time to develop. The following points should be considered:

- Right size seating – take advice from occupational therapist. Students with Down syndrome are often much shorter than other students and may need additional equipment.
- Same as other students – practice!
- Hand gym for hand strength.
- Colouring, drawing and writing practice – demonstrating small steps.
- Colouring does improve pencil/pen control.
- 'Old fashioned' patterns for writing.
- Tracing over, fade guides, copying under (though be aware that low contrast materials can be difficult for some students to see).

As handwriting can be challenging, it is important that students with Down syndrome learn to type. Handwriting and typing will continue to improve in teenage and adult years of the student is given the opportunity to learn and practice.

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ICT to support literacy learning

- Look for good software to support literacy learning.
- Visual support.
- Motivating.
- Non-verbal mode of response.
- Immediate feedback.
- Opportunity for practice.
- Guidelines for choosing software:
  - Avoid spoken or written language that is too complex.
  - Appropriate speed of activity – presentation and response.
  - Style and size of font.
- There are fewer packages for second level students which are designed at an appropriate language stage and are age-appropriate for teenagers, but programmes such as TTRS (Touch, Type, Read and Spell) are often used successfully by students with Down syndrome.
- For children who are having difficulty with spelling and typing, programmes that provide word choice are useful, eg Clicker.
- Students at second level often find typing easier than handwriting and access to a

laptop and general programmes such as Microsoft Word can be helpful.

- Computers are often motivating for students, and activities such as email (or even text messaging) can target literacy in a meaningful context.

General guidance

- Make reading fun
  - Use a variety of activities and/or presentations.
  - Be enthusiastic!
  - Start sessions with something you know the student can do.
  - Practice and repetition.
- Monitor and record achievements and progress.
- Continue literacy teaching throughout school.

RESOURCES

Teaching Reading to Children with Down Syndrome ~ A Guide for Parents and Teachers

Patricia Logan Oelwein

ISBN: 0-933149-55-7

Try Reading Again: how to Motivate and Teach Older Beginners age 10 and up

Horstmeier, D.

Woodbine House (CD rom of resources)

Interactive reading books

Joan Green http://www.greenhousepub.com/

General resources

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www.dsscotland.org.uk
www.ncse.ie
www.sess.ie
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www.ncca.ie

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Down Syndrome Ireland

Chapter 3

Numeracy

Numeracy

Studies of children with Down syndrome often report that math's skills lag behind literacy skills, however the ability of students with Down syndrome to learn maths varies a great deal. For instance, on entry to post-primary school, some students can be quite adept in dealing with numbers 1 – 100, money, telling time, etc., while others may only have a very basic knowledge of numbers 1 – 10. It is important to remember that these students are able to continue to master and develop their basic number skills throughout post-primary school. In fact, their number ability may improve considerably during the teenage years, as they become more focused on learning and are better able to concentrate during lessons.

Background Information

- All studies show that students with Down syndrome, like all students, respond to good teaching.
- As stated, research consistently shows higher achievement by teenagers in mainstream education, while the impact of special educational settings is neutral at best.
- Quality and quantity of education affects learning in both mainstream and special schools.
- Italian case studies suggest our expectations for students with Down syndrome in this area should be higher (for further reading, see the research of E. Monari Martinez).

What can we reasonably expect from students with Down syndrome in the area of numeracy?

Data from Sue Buckley's work with teenagers gives the following reassuring information:

- More than three quarters of young people with Down syndrome can count to 20.

- About half can count to 50.
- Around a third can read, write and say numbers to 100. Almost all can add amounts up to 10.
- More than three quarters of young people can subtract numbers to 10.
- Some can add, subtract, multiply, divide for bigger numbers – helped by written sums, apparatus and a calculator.
- The majority of young people know:
  - days of the week,
  - months of year,
  - tell the time by the hour (half tell by quarter hour).

How do students with Down syndrome learn maths?

Students with Down syndrome progress through the same steps of learning numbers as their peers. Given an adequate level of support, some can join in classroom activities and be taught in the same way as the rest of the class. The learning process will be that much easier for the teenager with Down syndrome if the teachers consider the student's learning strengths in visual processing and visual memory and offer concrete learning materials where possible.

Support materials like Numicon are invaluable when it comes to teaching maths to students with Down syndrome. Numicon teaches numbers through the recognition of patterns using number plates, which allows students with Down syndrome use their visual strengths and develop mental images of numbers 1 – 10. At a later stage, Numicon works as a visual cue/ support to teaching tens and unit place value, counting in 5's, 10's, etc. Using any other visual or concrete teaching materials can be a great help too, such as Cuisenaire rods, unifex cubes, number lines and hundred squares.

(These materials can be perceived as childish by the other students, and should be kept for resource times rather than used in class.)

Teachers need to be aware that even with visual support, students with Down syndrome still face difficulties in learning numbers due to their weaknesses in auditory processing and working memory. Furthermore, it is common for the teacher to underestimate a student's level of understanding because of delays in speech and language skills. If the student is not allowed adequate time to process information and respond to questions, progress in numbers and maths could be additionally hindered.

Support materials like Numicon are invaluable when it comes to teaching maths to students with Down syndrome.

Difficulty in processing language, together with remembering what to do and in which order, restrict the ability of students with Down syndrome to complete mathematical tasks and the use of additional visual materials will help the student to reach his or her potential in this subject area. Remember that students with Down syndrome often have good memorising capabilities.

Other teaching strategies can help your student progress through lessons. Rote learning - or constant repetition - enhances the retention of facts, reduces short-term memory stress and fuels the development and use of mathematical processes and strategies. It's also important to teach understanding before basic facts are memorised. In post-primary school, the student should be taught both basic numbers skills, such as 1-100, addition, division, multiplication and practical skills for independence, such as use of money, time, weighing etc.

Strategies to improve numbers and mathematical skills

- Be aware of skills your student has previously learned, and circle back frequently to ensure retention and generalisation of skills.
- Use concrete, visual materials to support learning in maths.
- Teach the vocabulary of maths together with maths activities – learning to read the vocabulary used in maths will aid the retention of key vocabulary.
- Teach maths symbols and numbers with the written word in the early stages, e.g. '3' is the same as 'three' and '+' means 'plus'.

- Offer activities where the student will succeed regularly to encourage motivation in maths learning.
- Use and encourage rote learning.
- Use and encourage rehearsal memory training techniques, especially for numbers and time sequential information, e.g. 11-20, counting in twos, fives, tens, hundreds, days of the week, months of the year.
- Try to make maths activities relevant to daily life experiences – this will fuel your student's motivation and independence.
- Collaborate with parents to encourage the use of daily experiences to enhance maths learning.

Developing number skills in everyday situations

- Page numbers.
- 'Finding out' activities, how many items/ money?
- Link to familiar situations, hobbies.
- Time measures e.g. how long until.., when will...?
- Planning - calendar, planner etc.
- Cooking, shopping etc.
- Measurements –weighing, scales, dials, digital, analogue etc.
- Recording – notebook and pen.
- Calculator.
- Researching - bus times, cinema times, etc.

Sample strategies for an individual student in first year

- Use maths 'stories' for addition and subtraction problems e.g. include favourite film and TV characters, sports teams or classmates names to keep your student focused.
- Use menus and 'shops' to encourage addition of money amounts.
- When remembering clock times prompt using gesture, for example pointing upwards for 'o clock' and downwards for 'half past'
- Vary activities throughout the lesson and give choices of activity to maintain concentration.
- Use mini whiteboards to sketch visual aids during the lesson.Coordinate maths goals with goals for practical subjects. For example, woodwork or home economics give opportunities to address targets like weighing, measuring, counting, etc.

Summary

- Number work is challenging for most students with Down syndrome
- Students will need supports for measurement, arithmetic, mental calculations and problem solving.
- Visual parts of the maths curriculum are more accessible e.g. shape, geometry, fractions, algebra, diagrams, graphs.
- Start to count coins and use money early.
- Link maths to everyday uses – make it relevant, especially for teenagers.
- Focus on the digital rather than analogue clock. (In terms of life skills, this will be more useful for reading timetables, etc.)
- Actively teach calculator use with both a traditional calculator and a phone calculator.

RESOURCES

Teaching Maths to People with Down Syndrome

DeAnnna Horstmeier

ISBN: 978-1-890627-42-3

Numeracy and Mathematics – Information Sheet

Available as a free download from:
www.downs-syndrome.org.uk

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Down Syndrome Ireland

Chapter 4
Movement, sport and leisure

Movement, sport & leisure

Motor skill development in young people with Down syndrome is both delayed and somewhat different to that of typically developing students. Poor muscle tone and loose joints, typical traits of people with Down syndrome, affect their motor development. This is highly variable between individuals.

Active participation in physical education class will encourage motor development in these students. Make sure the teenager with Down syndrome is not left on the sidelines. They should participate in all activities as long as there is no medical reason to avoid. With continual practice, motor skills will improve.

Motor skills matter for all aspects of daily life

- Developing 'gross' motor skills - for daily movement, play, sports and leisure
- Developing 'fine' motor skills - for handwriting, mealtimes (cutlery, cups, pouring), self-help (dressing, toileting)
- Developing further independence in daily activities and personal care
- Preparing for work and inclusion
- Developing physical stamina

Skills improve with practice (of the actual movement) but students with Down syndrome will require additional opportunities to learn and practice physical skills in order to make progress.

PE classes often require processing of verbal instructions, which is an area of weakness for most students with Down syndrome. Always remember that students are visual learners, who will make more use of observation, copying and modelling than following instructions.

Always remember that students are visual learners, who will make more use of observation, copying and modelling than following instructions.

How do people acquire new motor skills?

Generally, motor skills are learned as patterns. We develop plans of action for specific movements. These neuromotor programmes, once established, can be used to initiate a learned action providing a 'feedforward' plan. This sounds complex, but if you think of a complex motor task which you can perform well (for example, driving a car), once the neuromotor plan is established and practiced, you no longer have to think of the individual movements required (for example, hand and leg movements required to change gear). So:

- Actions are started by prepared plans of actions or 'neuromotor programmes' – these provide 'feedforward' plans that are activated to initiate a movement (and need to be learned).
- Information from senses and the body provide continuous 'feedback' information.
- Both feedforward and feedback are used for each movement – with online control in real time.
- Think of 'picking up cup' example (e.g. varies in quantity, container …).

Students with Down syndrome are well able to learn new neuromotor programmes and master motor skills. Many adults are excellent dancers, and many excel at sports involving complex motor patterns, such as swimming, golf, basketball, etc. They may take more time to learn, but opportunities to practice and succeed in motor activities will lay the foundations for a healthy, active adult life.

What are the barriers to inclusion for students with Down syndrome?

Health Issues:

- Health issues may affect energy and stamina.
- Almost half of people with Down syndrome have heart conditions at birth (though most make good progress after surgery). This is not usually a reason to avoid physical activity but medical advice may be needed.
- Thyroid disorders are more common in people with Down syndrome. These can impact on energy and participation.
- Hearing and vision can impact on ability to participate, but can usually be corrected.
- An increased vulnerability to infections may reduce ability to participate.
- There is an increased risk of atlanto-axial instability, which is a spinal condition. This is relatively rare and should not inhibit most activities, but medical advice may be needed.

Researchers suggest that most teenagers and adults are underachieving in motor skills, and that continued practice of motor patterns is key.

- Research shows significant improvement in even fine-motor tasks in adults (writing, tying laces).
- Most children and teenagers are not as active as they could be.
- Balance is important for running, jumping and for all motor skills – takes longer to develop.
- Movement and body control important for self-esteem and confidence – and for play and inclusion – and for social activities.

Encourage movement and physical development at all times. Remember more practice is needed to see progress. Ensure that the student with Down syndrome has the opportunity for:

- Inclusion in PE and in games.
- Inclusion in dance and drama.
- Inclusion in swimming.

Be aware that you may need creativity to adapt activities and encourage participation. Many other children have developmental coordination difficulties, and may also benefit from a creative approach!

Encourage movement and physical development at all times. Remember more practice is needed to see progress.

Why is it so important to develop interest and ability in sporting activities?

Research shows that sporting abilities increase community and leisure opportunities for people with disabilities. Being able to ride a bike, skateboard, kick a ball, swim, etc, all increase the chance to join in activities with peers out of school – they provide a bridge for doing things together. Increased activity and social participation has benefits for both physical and mental health.

Physical activity should not be limited to PE lessons in school. Try to encourage a range of opportunities for inclusive participation in all kinds of sports, leisure and community activities, including:

- Swimming
- Dancing
- Walking
- Ball games
- Any sport that young person enjoys
- Housework – laundry, shopping, cleaning
- Fitness activities – gym, aerobics, cross trainer
- Wii fit and sports

Benefits for health and independence

- Our movement skills effect everything we do – and being able to control one's body effects confidence.
- Learning sporting skills from early – starting with swimming and ball games – set the scene for becoming skilled later. Those with sporting skills have more active social lives. Learning to be fit and active from early has health benefits and can reduce the likelihood of obesity.

- Movement skills underpin a range of independence, self-help and work related activities.
- Remember practice, practice, practice is what is needed.

Include students with Down syndrome in class games – most will enjoy all kinds of games, even if they are not 'scoring' goals all the time.

Strategies to encourage participation in PE

- Include students with Down syndrome in class games – most will enjoy all kinds of games, even if they are not 'scoring' goals all the time.
- Help the student feel like s/he is succeeding in the game, aided by one-on-one support from peers, the teacher or SNA.
- Offer a small group activity in addition to the class activity, if the student is reluctant to participate in a PE lesson.
- Encourage classmates to be patient and helpful to their peer with Down syndrome at all times.

- Provide visual demonstrations of actions/skills during the PE lesson – these can be reinforced by the SNA.
- Practice improves performance and reaction times.
- Some students with Down syndrome will focus on accuracy rather than speed.

Many students find motor skills challenging, but it is important for students with Down syndrome to be encouraged to lead full and active lives, and promoting inclusion at every opportunity.

RESOURCES

Gross Motor Skills in Children with Down Syndrome ~ A Guide for Parents and Professionals

Patricia C. Winders

ISBN:0-933149-81-6

Fine Motor Skills in Children with Down Syndrome ~ A Guide for Parents and Professionals

Margaret Bruni

ISBN:1-890627-03-8

Fine Motor Skills in children with Down's syndrome – Information Sheet.

Available as a free download from:
www.downs-syndrome.org.uk

General resources

Differentiation in Action

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Available as a free download from:

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Important links and websites

www.downsyndrome.ie
www.downs-syndrome.org.uk
www.downsed.org/
www.dsscotland.org.uk
www.ncse.ie
www.sess.ie
www.education.ie
www.ncca.ie

Acknowledgement

We acknowledge the work of Professor Sue Buckley, Down Syndrome Educational Trust UK, which continues to provide inspiration in paving the way towards an inclusive educational experience for teenagers with Down syndrome.

Down Syndrome Ireland

Chapter 5

Pathway through Junior Cycle

Pathway through Junior Cycle

The Framework for Junior Cycle (2015) outlines the key educational changes that the Department of Education and Skills (DES) have put in place for young people in the first three years of their post-primary education. It builds on and advances the vision for junior cycle reform that was outlined in the Framework for Junior Cycle (2012). The Framework for Junior Cycle (2015) gives schools greater flexibility to design programmes that are suited to the needs of their junior cycle students and to the particular context of the school.

Each school's programme:

- Will be guided by the twenty-four statements of learning, eight principles and eight key skills that are at the core of the new Junior Cycle.
- Will encompass learning in subjects or a combination of subjects and short courses.
- Will include an area of learning entitled Wellbeing.
- Will provide a range of other learning experiences.
- May include priority learning units (PLUs) that will help to provide a junior cycle programme that is appropriate to the needs of particular students with significant special educational needs.

The Framework for Junior Cycle (2015) gives schools greater flexibility to design programmes that are suited to the needs of their junior cycle students and to the particular context of the school.

Schools will have the flexibility and discretion to decide what combination of subjects, short courses or other learning experiences will be provided in their three-year junior cycle programme. The Framework for Junior Cycle (2015) emphasises the importance of valuing, acknowledging and affirming all the students' learning opportunities and experiences during the three years of junior cycle. It also envisages that parents/guardians and students will get a broader picture of students' learning. The approach to reporting will value the different aspects of students' learning and the range of assessment approaches, both formative and summative, that generate evidence of this learning by students.

The approach to reporting will facilitate provision of assessment information based on the following elements:

- Ongoing formative assessments, including routine teacher-designed tasks and tests.
- Structured classroom-based assessments conducted in second and third year.
- Assessment of learning arising from short courses or priority learning units.
- The written assessment task following the second classroom-based assessment.
- The results of the summative State examination.

Subjects available for study

- English; Irish; Mathematics; Science; Business Studies;
- Modern Languages (French, German, Spanish, Italian);
- History; Geography; Religious Education; Art, Craft & Design;
- Home Economics; Music;
- Technology Subjects (Materials Technology (Wood); Technical Graphic Metalwork; Technology);
- Jewish Studies and Classics.

Junior Certificate School Programme (JCSP)

The Junior Certificate School Programme is a national programme sponsored by the Department of Education and Skills and the National Council for Curriculum and Assessment. It originated in the early school leavers' programmes initiated by the Curriculum Development Unit. It is a social inclusion programme that is aimed at students who are identified as being at risk of being socially or academically isolated or at risk of early school leaving before the Junior Certificate has been achieved.

Level Two Learning Programmes (L2LPs)

From 2014, first year students began taking elements of the new junior cycle.

The changed format includes programmes, called Level 2 Learning Programmes (L2LPs) for a small minority of students with particular special educational needs. L2LPs are designed to suit both special school and mainstream settings. The L2LPs will build upon prior learning and are designed primarily around 5 Priority Learning Units (PLUs) that focus on the social, personal and prevocational skills that prepare students for further study, for work and life.

The PLUs include:

- **Communicating and literacy:** Covers both verbal and non-verbal ways of receiving and giving information. Reading and writing are also further developed.
- **Numeracy:** Develops awareness of patterns and relationships in shape and number as well as skills in estimation, measurement and problem solving.
- **Personal care:** Deals with health and wellbeing, covering areas such as healthy eating and healthy lifestyles.
- **Living in a community:** Students develop strategies to establish and maintain positive relationships with people around them. Seeking help and advice as well as dealing with conflict are included here.
- **Preparing for work:** Assists students in making the transition from school to further education, training or employment.

All students who complete a junior cycle programme will receive a certificate awarded at Level 2 or Level 3 of the National Framework of Qualifications (NFQ). L2LPs will lead to a certificate at Level 2. Students undertaking L2LPs also study two short courses at this level.

Students undertaking a L2LP are those with disabilities categorised as being in the lower mild to higher moderate range of general learning disabilities. These students will benefit from an L2LP as it purposely focuses on development and learning in such areas as:

- basic literacy and numeracy,
- language and communication,
- mobility and leisure skills,
- motor co-ordination,
- social and personal development.

As far as possible, students will be included in mainstream classes. If the programme has been recommended for a student, she or he will follow a personalised educational programme to meet his or her needs. It will be made up of aspects of each PLU and these will be taught through the junior cycle subject curriculum set out for all students by the National Council for Curriculum and Assessment (NCCA). The L2LP for the individual student will be developed in consultation with students, parents, teachers and other relevant professionals. Evidence of learning can be generated through a wide range of assessment methods and can be presented in a variety of forms.

The L2LP for the individual student will be developed in consultation with students, parents, teachers and other relevant professionals.

Other features of L2LPs

- Using expressive arts to communicate
- Using information and communication technology for a range of purposes
- Developing spatial awareness
- Managing money
- Becoming aware of one's sexuality
- Making personal decisions
- Using local facilities
- Making consumer choices
- Preparing for a work-related activity
- Developing an awareness of health and safety equipment

A student undertaking a L2LP may be able to achieve some aspects of a Level 3 subject or short course but the majority of their programme would be at Level 2. A child should not be undertaking L2LPs if they are in the JCSP programme because they are designed only for those students who are not able to take the existing Junior Certificate (which includes the JCSP). There will be regular reporting during junior cycle. At the end of junior cycle the student will receive a school certificate (the Junior Cycle Student Award) and a school report. The school certificate will record results in the PLUs and short courses which have been has successfully completed. Other learning experiences and features of school life such as attendance will be recorded in the school report.

Junior Cycle journey:

When students move into Post Primary, it is best practice that they are exposed to all subjects offered to 1st years in their school. It is preferable that all students have this option.

Most make choices and reduce their subject numbers for 2nd year. For students with Down syndrome, this subject reduction usually starts around Halloween in 1st year with further reductions at Christmas time. Subject choice should reflect the student's strengths, interests and aptitudes.

At the beginning of 2nd year, subjects may be further reduced (maybe to 5/6). The most common subjects chosen at this point are English (very important to maintain literacy levels), Home Economics, Civic, Social and Personal

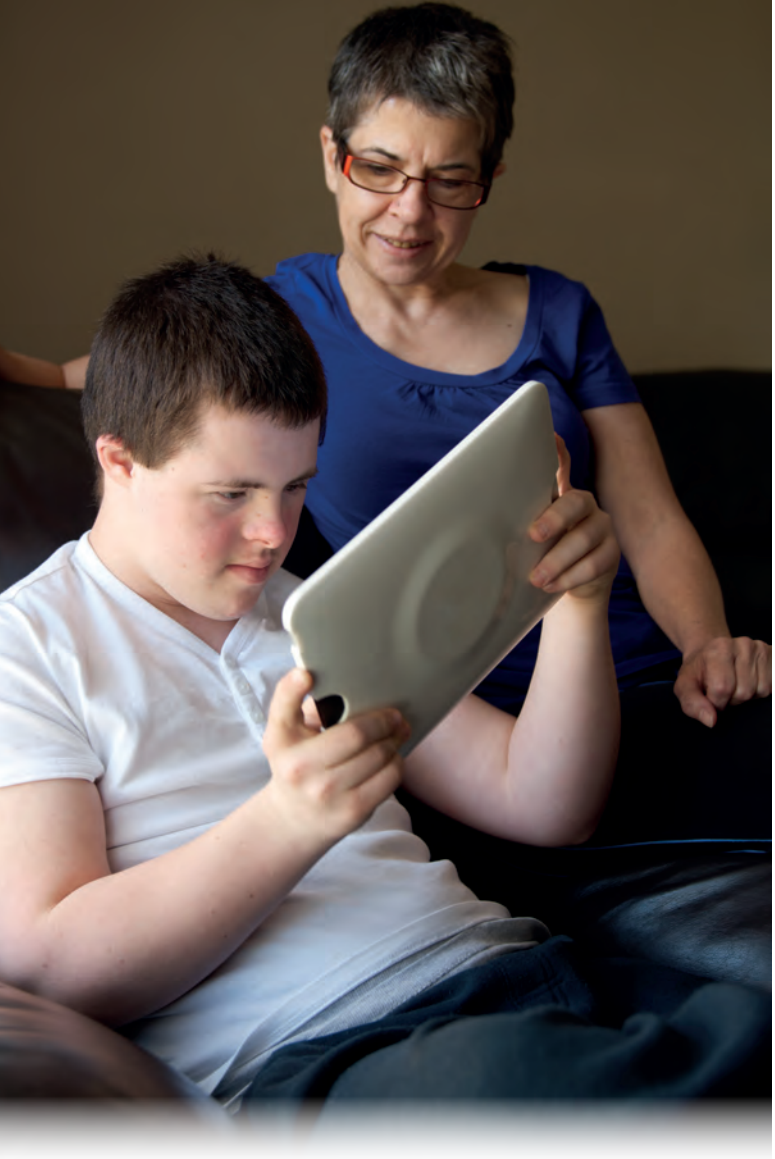
Education (CSPE), Art, History/Geography and Science. Samples of Differentiated topics for these subjects are included in the Differentiation project on the Down Syndrome Ireland website www.downsyndrome.ie. The student's subject choices should not be restricted to the most common choices, but should reflect the interests and aptitudes of the individual. Students with Down syndrome have successfully studied many different subjects at Junior Certificate.

Students with Down syndrome have successfully studied many different subjects at Junior Certificate.

For best results and to maintain interaction with peers and classmates, the student would continue to attend all mainstream classes in their chosen subjects. It is not necessary to identify exam subjects until later.

Students can choose to take any number to Junior Certificate exam level. Some students decide to take five or more subjects for examination. Other students may opt to do one or two subjects in one exam year and to do another subject in a different year. Given the reduced number of subjects being studied, students with Down syndrome will have free periods in the school day. Ideally this will be the time when resource support is offered. This support can be in a one-to-one setting or in a small group. The teacher best placed to offer subject support is the subject teacher. Repeating a class is another positive way of learning for students. Many schools will have more than one Home Economics Classes for 2nd years each week - why not allow the student with Down syndrome take all of them? The repetition really helps to consolidate learning, and is a positive use of free periods, which could otherwise be difficult to supervise.

Other suggestions for making positive use of free periods are: Information Communication Technology (ICT). These skills need constant work, as do typing skills. Involvement in games, PE classes, music groups, library work are also possibilities depending on interest and aptitude. Good planning, good timetabling and commitment from principals and staff allow this system to happen.



RESOURCES

Level 2 Learning Programmes Guidelines for Teachers

Available as a free download from:

www.ncca.ie

Framework for Junior Cycle 2015

Available as a free download from:

www.ncca.ie

General resources

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Down Syndrome Ireland

Chapter 6

Behaviour/social and emotional development

Behaviour/social and emotional development

Behaviour

Behaviour matters long-term

It is a person's behaviour, whether it's socially appropriate or unacceptable, that is the single most important factor which determines the way they are regarded. Learning age-appropriate social behaviour is as important as academic learning, and is largely independent of academic ability.

Socially appropriate behaviour is one of the major influences determining:

- Whether you can form successful relationships (personal and professional),
- Whether you are accepted or rejected by peers,
- Living and working situation,
- Social integration,
- Quality of life.

> **It is a person's behaviour, whether it's socially appropriate or unacceptable, that is the single most important factor which determines the way they are regarded.**

There are many factors which influence how we behave in a situation, some internal, some external.

Some influences on behaviour

- Temperament and personality.
- Parent management styles and expectations.
- Teacher management styles and expectations.
- Emotional climate – feeling safe, feeling loved and valued at home, feeling liked and respected in school and community settings.
- Ability to understand what is expected in a situation.
- Ability to communicate effectively.
- Reactions of others – both children and adults – to behaviour.

What you should know about Down syndrome and behaviour

Most teenagers with Down syndrome are generally well-behaved students. One to two out of every ten students with Down syndrome may have significant behavioural difficulties, though if these are well managed, they usually decline significantly as the student matures.

Students who have Down syndrome are usually sensitive to the emotional situation around them. Ensuring that they feel welcome and appreciated in their school can prevent many behavioural issues.

Students with Down syndrome are aware of their own capabilities and can often display so-called failure avoidance, which presents itself in stubborn behaviour – if failure is the expected outcome, the student won't want to participate in the activity. Well differentiated goals that are achievable will increase motivation and reduce these stubborn episodes.

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Causes of inappropriate behaviour

- A teenager with Down syndrome might misbehave due to anger or frustration – acting out can sometimes be the only recourse when speech and language pose particular difficulties.
- Having different work to the rest of the class, particularly if this is made very obvious - she or he may simply want to do the same assignments as everyone else.
- The realisation that she or he is unable to cope without additional help when doing the same activities as everyone else.
- Assigned work is too difficult or uninteresting.
- Annoyance with people who don't take time to understand what she or he is trying to communicate.
- Misunderstanding instructions or forgetting what she or he has already been told.

Interacting with a teenager with Down syndrome

Speech and language impairments affect access to all areas of the curriculum. Language impairment is probably the most significant disability for the majority of students with Down syndrome. It is the responsibility of the the teacher to make sure that the student with Down syndrome has the opportunity to understand what is expected. Bear in mind that many students will also have some degree of hearing loss, which will also cause difficulties in understanding instructions.

- Always face him or her - make eye contact!
- Try to speak to him or her at the same level – your lip patterns and facial expressions will support understanding.
- It is not necessary to raise your voice or slow down your speech (unless you normally speak very softly or quickly).
- Supplement verbal instruction with visual prompts.
- Give one instruction at a time.
- Use short sentences.
- Emphasise key words, using sign or gesture.
- Pause after each instruction.
- Praise each attempt at following instruction.
- Use body language.

Prevention

As with any other students, it is better to create a positive learning environment which reduces the likelihood of problem behaviour occurring. Many difficulties can be prevented by a change in routine and a change in adult behaviour at home or at school. Proactive strategies are always better than reactive ones.

Some of the most common preventative strategies are:

- Provide positive peer role models and reward imitation of positive behaviours.
- Keep student busy to avoid boredom.
- Ensure appropriate communication systems are in place.
- Ensure that people are listening to the message the student is trying to convey.

Prevention – from the student's perspective

There is always a reason for a difficult behaviour, but in order to find that reason, you may need to look at the situation from the student's perspective. Some things to consider are:

- Is the student having a good time? Education should be a positive experience!
- Is there something happening outside school that is influencing behaviour in school? Liaise with home, consider emotional well-being.
- Does the student have an appropriate (and accepted) way of signaling if they are overwhelmed and need a break?
- Does the student understand the social expectations of the situation? They may need active teaching of positive social behaviours, self-regulation and ways to express emotions.
- Do people generally use positive language? Most students with language difficulties will respond better if you show or tell them what you need them to do (rather than telling them what they shouldn't do).
- Are positive behaviours rewarded throughout the day?
- Are relationships with key staff and students generally positive?

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Prevention – classroom strategies

Creating a positive classroom environment is key to managing difficult behaviour, and is the responsibility of the teacher to uphold. In any situation where a student is a behavioural challenge, the easiest factor to change is your own behaviour as a teacher. Reflecting on how your approach may be contributing to the difficulties of the student and on how you can create an environmental change to reduce frustration can be very productive. Some things to consider are listed below.

"Creating a positive classroom environment is key to managing difficult behaviour, and is the responsibility of the teacher to uphold.

Do you...

- Set realistic and achievable targets?
    - Plan your lessons with appropriate differentiation, including additional materials where necessary? (The student with Down syndrome may need more than one way of approaching a learning goal.)
- Design activities that are engaging to students?
- Have a small number of rules which are explicitly taught and consistently upheld?
- Give warning and preparation time for transitions, changes and demands?
- Provide clear instructions, including individualised instructions for children who need additional support?
- Give jobs and responsibilities, allowing the

student to help rather than always being helped?

- Use visual time tables, lists and reminders to promote cooperation and independence?
- Provide ways of making choices and having some control?
- Provide opportunities for student to communicate about worries, changes, preferences?
- Ensure that the presence of the SNA is not causing difficulties?

Look for opportunities where the different learning style of the student with Down syndrome could be used to help others. For example, creating a PowerPoint summary of one key point could be both a learning goal for the student with Down syndrome and a useful summary for the rest of the class. A photo recipe could be a demonstration of learning and a useful resource for others.

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The SNA relationship is worth considering further. It can be very difficult for teenagers to have constant supervision by an SNA. This is a stage where asserting autonomy and independence and forging relationships with peers is very important. An SNA who is a 'mother figure', or many different SNAs might prove difficult for the student. Constant supervision can also lead to the student being pulled up for what is essentially normal teenage behaviour, causing resentment.

- Change SNA if the relationship is negative.
- Ensure that the student is encouraged to develop appropriate independence skills.
- Do not provide too many different assistants.
- Pick your battles carefully.

Encouraging good behavior rather than punishing bad behaviour is usually a productive approach. That doesn't mean that the student with Down syndrome is exempted from the consequences of breaking rules. If the usual outcome of failing to turn in homework is detention, then the student with Down syndrome should also get detention provided the homework load was reasonable and differentiated, and the student understood what needed to be done.

Strategies to encourage good behaviour

- Teach all skills explicitly.
- Specify positive reinforcement, e.g., 'good talking', 'good listening'.
- Use other students as examples of good behaviour.
- Teenagers with Down syndrome will often respond quicker if their classmates tell them their behaviour is inappropriate, versus constant reprimands by the teacher.
- Be aware that the student will need to rehearse a skill/behaviour several times in relevant situations before it is learned – the SNA can sometimes help with this.
- Redirect attention away from confrontation and focus on the positive.
- Implement a behaviour modification programme if there are significant behaviour difficulties, remembering that any attempt to modify behaviour must be preceded by a thorough observation of when, why and with whom the behaviour occurs, and that any strategies for changing behaviour need to be implemented consistently for at least 4-6 weeks.

Before trying to change any behaviour, it is important to understand why it is occurring. The following checklist may help

Teenagers with Down syndrome will often respond quicker if their classmates tell them their behaviour is inappropriate, versus constant reprimands by the teacher.

Behaviour checklist

1. Attention seeking?

- Is the student used to having a support assistant on hand at all times?
- Do they object when the assistant helps others?
- Have they been used to getting special treatment?
- Have they successfully used attention-seeking behaviours as avoidance?
- Do they enjoy being the centre of attention?
- Is attention given for positive behaviour?

2. Angry or frustrated?

- Do they want to be the same as everybody else?
- Are they unable to do the things that others can do?
- Are they being teased or bullied?
- Are other people impatient or unable to understand what they want?
- Do they find it difficult to adapt to different ways of working in different classes?

3. Confused or uncertain?

- Are they unsure what they are expected to do?
- Have they forgotten or failed to process a verbal instruction?
- Are they confused by different rules for different lessons?
- Are there unrealistic expectations of the student?
- Have their capabilities been over or underestimated?

4. Need to exert control?

- Do they refuse to cooperate on principle?
- Are they given few opportunities to choose their own activities?
- Do they feel under pressure and need a break?
- Do they resent being withdrawn from class?

5. Lack maturity?

- Is their behaviour more appropriate for a younger student?
- Do they lack age appropriate social skills?
- Has immature behaviour been ignored or reinforced in the past?
- Do they lack social skills as a result of continual 1:1 support?
- Have they been over-supported/protected in the past.

Social and emotional development

Behaviour issues can be related to self-help and independence skills, while these in turn are influenced by:

- Motor skills
- Cognitive ability
- Health
- Opportunities
- Practice
- Personality
- Expectations

See the first chapter in the series for a more detailed discussion of these areas.

Developing independence

Regardless of the barriers, during the teenage years it is vitally important that the student with Down syndrome is encouraged and supported to develop their independence.

Independence is vital for everyone. If you never take responsibility or make your own decisions, then you are denied not only the possibility of learning from your mistakes, but also the chance to develop competence and to celebrate genuine achievement and success. We all learn through practice, through making mistakes and having to deal with the consequences. If we are given real choices, we learn to make decisions. If we are given the chance to help others (rather than always being on the receiving end), then we can feel equal, important and valued. If we are given responsibilities, we have the chance to make a genuine contribution.

Independence needs to be promoted at school and home throughout the teenage years. If you are not given the opportunity to practice making everyday decisions, then foundations can't be laid for the larger decisions that come with adult life.

Independence needs to be promoted at school and home throughout the teenage years. If you are not given the opportunity to practice making everyday decisions, then foundations can't be laid for the larger decisions that come with adult life.

Developing independence in school:

Think about the expectations of the class and school environment.

- Are students expected to learn to arrive at the right classroom with the right materials at the right time, or is this the role of the SNA?
- Are students encourage to problem solve, or are solutions always provided?
- Are tasks broken down into small achievable steps which can be mastered independently?
- Is there time allowed to develop inde-

pendence, or is the student helped more than necessary to speed things up?

- Do students learn routines for everyday activities which can be applied in other contexts?
- Are students encouraged to progress through a number of activities using timers and visual timetables, or are they led into every new task by a teacher or SNA?
- Is there a balance between ensuring the student has opportunities to develop their skills and allowing them to be independent e.g. velcro vs zips, remembering vs using lists.

Self - help skills

Some students may still need support to develop their self-help skills in various areas, for example:

- Mealtimes
    - May still need to improve ability to use cutlery, or pour from a jug – identify targets and find ways to practice (do not leave practice to mealtimes).
    - May need to learn to carry out new routines such as collecting a meal on a tray in the canteen.
    - Many need support initially to find seat, to clear up after meal and replace chair.

It can be beneficial to enlist support from peers for some of these targets, as the constant presence of the SNA will lead to reduced contact with peers. Life and work skills like preparing food, clearing up, washing up, making healthy choices can be addressed in Home Economics lessons, rather than at lunch. It is not helpful for the student with Down syndrome to be the only teenager who has their lunch choices vetoed by an SNA. If the options available for lunch are not healthy enough for the student with Down syndrome, maybe a whole school approach to healthy eating needs consideration.

- Changing clothes, taking responsibility
    - Dressing – some students with Down syndrome may need extra time to change for PE. Try to allow an earlier start rather than offering help to speed things up.
    - Remembering what is needed – taking responsibility for having the right kit on the right day.
    - Ensure that students with Down syndrome are expected to help with all tidying tasks like other students – for example, collecting kit used in games.
    - Skills steadily improve and most teenagers and adults with Down syndrome are competent at self-care if given time and opportunities to practice.

Independence in self-care tasks is good for self-esteem. In Sue Buckley's surveys of 11 to 20 year olds, most teenagers are developing practical care and self-help skills. The development of these is extremely important for adult life. They allow the adult to have privacy and personal space. Much of the work on developing independence in these areas belongs at home, so a coordinated approach is helpful.

> **Independence in self-care tasks is good for self-esteem.**

Independence brings risks. Not every decision will be a good one, but the focus should be on managing those risks rather than denying the student choices. Try to change mindset from 'this student is not able for that' to 'what skills does this student need to learn to do that safely?'. Ideally, risk assessment is about minimising any risks by thinking ahead. What could go wrong? What skills will the teenager need to manage something successfully, and how can those skills be safely taught? Sometimes, the consequences of a mistake are not too serious, and learning by experience may be possible. Peer support can be helpful here, and mobile phone use should be encouraged and taught, as the ability to call for help should not be underestimated.

Socialisation

Every student wants to fit in and be an accepted member of the school community – teenagers with Down syndrome are no different. School is the perfect place to explore and develop interpersonal relationships outside the family, with friends. During their teenage years, conformity is often the unwritten rule to belonging to the group. For those with Down syndrome, 'the rule' can often make forming and sustaining friendships difficult and painful, which will ultimately affect how that young person feels about him or herself too.

Given that teenagers are particularly sensitive to difference, separating a student with Down syndrome from his or her peer group can be the precursor to isolation. Consequently, the full learning experience in school has to focus not just on academics, but on teaching all students to respect and learn from one another. Such an active learning strategy inside and outside the classroom will encourage more supportive and inclusive behaviour from everyone, including school staff.

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Strategies to encourage socialisation

Staff training

Educating all staff members about Down syndrome will discourage stereotypical views of students with disabilities. While traditional teacher training emphasises academic skills, encouraging staff to support and sustain students' friendships is helpful too.

Model appropriate behaviour

Expect all students and staff to treat each other with respect - model respectful behaviour at all times!

Take a zero-tolerance approach to bullying

Students who are different often experience bullying. The Down Syndrome Ireland publication 'I'm OK, You're Mean' is available on our website www.downsyndrome.ie and can be a useful resource. It is written by adults who have Down syndrome and describes situations where they have been bullied and sometimes blamed for the situation.

Dispel myths

If the class has questions about Down syndrome, being informative and positive in your response is an effective way of dispelling myths about the disability – which in turn will encourage positive behavior. Take the opportunity to provide role-models - for example, when planning career fairs invite an adult with Down syndrome to talk about their work. Become aware of the further and higher education options open to people with Down syndrome, and the kinds of employment which may be available.

Teach social skills

Provide opportunities for students with and without Down syndrome to learn social skills together. Divided into groups, students can be taught to practice skills like greeting one another, listening, taking turns, initiating and engaging in conversations, brainstorming ideas, expressing opinions and solving problems together. Teaching skills to encourage problem-solving, anger management and anti-bullying are particularly relevant for the positive inclusion of students with disabilities in mainstream schooling.

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Social groups

Allocate specific class time to discuss attitudes towards difference, prejudice, fears and intolerance, involving the teacher and/or the guidance counsellor. Providing time for all students to have a say will ensure that the experience is not a negative one for any particular student. Limiting group numbers to five or six students is a good way of both combining the students' individual skill levels and allowing each group member the opportunity for modelling appropriate behaviour.

Including friends

Students tend to make friends with other students in their class. If friends who shared a class together one year are not assigned to the same class the following year, they will have fewer opportunities to spend time together - and their friendship might not continue. Where possible, be aware of friendships between students with and without disabilities and make arrangements for those students to be in the same classroom from year to year, supporting these friendships by organising time for students to socialise and work together regularly.

The Individualised Education Plan (IEP)

An IEP tailored to their specific needs of the student with Down syndrome can be reviewed at regular intervals. Including goals for social interactions in an IEP will ensure that the skills related to these goals will be taught, monitored and evaluated regularly – the IEP is always a working document.

Communicate with parents

Parents rarely have the chance to observe their children during the school day and may consequently not have an idea about how their child is developing socially in the school. Let parents know about budding friendships in school, which could encourage them to actively support their child's relationships outside the school perimeters.

One-to-One matching programmes

Implementing a clear approach, like a buddy system, to match peers with one another may be necessary. Teach students to work together as peer tutors or to collaborate on projects – fulfilling an academic requirement can fuel lasting friendships. Include various learning styles and expectations.

Circle of friends

Encourage the class to involve students with Down syndrome in an extracurricular 'Friendship Club', a group which gathers regularly at a pre-arranged time and location, e.g. lunchtime in the school hall on Thursdays. Cooperative activities like singing, acting, dancing and special interest clubs are great for building relationships. Participating students need to make a commitment to stay with the group for a certain amount of time. Allocate an adult facilitator to be responsible for getting the group together and helping its members define their group objectives.

SNA Support

While SNA support is likely to benefit students who have Down syndrome at second level, the SNA needs to be as unobtrusive as possible, to avoid singling out the teenager as different.

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RESOURCES

Behaviour - Information Sheet

Available as a free download from:

www.downs-syndrome.org.uk

Adolescence and sexuality - Information sheet

Available as a free download from:

www.downs-syndrome.org.uk

Mental Wellness in Adults with Down Syndrome- A guide to Emotional and Behavioural Strengths and Challenges

Denis McGuire Ph.D. & Brian Chicoine M.D.
ISBN: 978-1-890627-65-2

General resources

Differentiation in Action

The need for support in differentiating materials for students with Down syndrome has been identified by parents, teachers and other educators as the syllabus for second level subjects – as presented in current text books and materials – is beyond the level of comprehension and reading ability of many students with Down syndrome.

Booklets which show differentiated segments for a number of subjects: Home Economics, English, Science, History, Geography and Civil, Social and Political Education (CSPE) have been developed. Each booklet offers a number of 'sample lessons' and some subjects also have additional lessons in the form of PowerPoint presentations.

Available as a free download from:

www.downsyndrome.ie

Online training courses

The following courses are available:

- Effective education for children with Down syndrome in school
- Implementing the Reading and Language Intervention for children with Down syndrome (RLI)
- Managing behaviour difficulties for children with Down syndrome
- Improving speech and language development for children and young people with Down syndrome
- Supporting the Reading and Language Intervention for Children with Down syndrome (RLI) - Accredited trainer training

Available from:

https://www.down-syndrome.org/en-us/services/training/courses/

The Down syndrome issues and information education & development series

A series of 34 books and checklists that cover developmental and educational issues from birth to 16 years

- Early Years {0-5 years}
- Primary & Junior {5-11 years}
- Secondary {11-16 years}

Available from:

The Down Syndrome Educational Trust
The Sarah Duffin Centre
Belmont Street
Southsea
Hampshire
England PO5 1NA

Telephone: + 44 (0) 23 9285 5330
Fax: + 44 (0) 23 9285 5320
E-mail: enquiries@downsed.org
Website: http://www.downsed.org/

Education support pack (Primary & Secondary)

A pack giving information and practical advice and strategies for the inclusion of a child with Down syndrome in mainstream educational settings.

Available from:

Down's Syndrome Association
155 Mitchum Road
London SW17 9PG
Telephone: 020 8682 4001
Fax: 020 8682 4012
Email: info@downs-sydrome.org.uk

Available as a free download from:

www.downs-syndrome.org.uk

Important links and websites

www.downsyndrome.ie
www.downs-syndrome.org.uk
www.downsed.org/
www.dsscotland.org.uk
www.ncse.ie
www.sess.ie
www.education.ie
www.ncca.ie

Acknowledgement

We acknowledge the work of Professor Sue Buckley, Down Syndrome Educational Trust UK, which continues to provide inspiration in paving the way towards an inclusive educational experience for teenagers with Down syndrome.

This publication was produced by
Down Syndrome Ireland
thanks to funds raised through our
HB Fundays campaign.

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